ledge of the internal pressures.—H. **Abraham** and R. **Planiol**: The use of the Baudot telegraph in wireless telegraphy. The Baudot quadruple instrument used in the ordinary way records 7200 words per hour. A description of the adaptation of this to wireless transmission is given. The first experiments were made across Paris; later the apparatus was successfully used between Paris and Nogent-le-Rotrou.—M. St. **Procopiu**: Electrical double refraction of mixed liquids and crystalline structure.—A. E. **Lindh**: The absorption spectra of chlorine for the X-rays. All chlorides in which the chlorine is monovalent have similar X-ray spectra, but there is a displacement of the limits of absorption in $KClO_3$ and $KClO_4$, compounds in which the valencies are 5 and 7.—D. **Coster**: The principle of combination and the law of Stokes in the X-ray series.—MM. M. **Menard** and **Pestel**: Concerning the danger of radiological installations. The authors conclude that, provided the usual precautions required for the safety of the operator are taken, there is no real danger to third parties in neighbouring rooms.—A. **Tian**: A theory of the slow hydrolysis of salts.—MM. P. **Jolibois** and **Bouvier**: The reversibility of the reaction $CaCO_3 = CO_2 + CaO$. The self-recording apparatus described in an earlier paper has been applied to the study of the dissociation of calcium carbonate. The heating and cooling curves are not the same, and hence the reaction is not strictly reversible.—G. **Dupont**: Contribution to the study of the acid constituents of the exudation of the maritime pine. The composition of pimaric acid. Pimaric acid purified by Vesterberg's method is a mixture of 37 per cent. of dextropimaric acid and 63 per cent. of the lævo-acid.—L. **Longchambon**: The measurement of the rotatory power in biaxial crystals.—L. **Cayeux**: The petrographic *rôle* of fossil Alcyonaria deduced from the analysis of the Jurassic iron minerals of France.—L. **Joleaud**: A deep boring which demonstrates the existence of transported strata in northern Tunis. A trial boring for oil made at Aîn-Rhelal started in the Middle Miocene, then passed through the Trias (630 metres), and finally met with strata undoubtedly belonging to the Upper Cretaceous.—F. **Ehrmann**: The Trias of the Kabylie des Babors (Algeria).—J. **Beauverie**: The resistance of mitochondria and plasts, and relations with attacks by parasites.—G. **Mangenot**: The structure of the antherozoids of the Fucaceæ.—R. **Lance**: The use of coloured screens for fighting against cryptogamic diseases of plants. The plants are sprayed with solutions containing blue, green, and violet dye. The fluid dries and leaves the parts of the plant covered with a colour screen allowing blue, violet, and ultra-violet light to pass. No results of the treatment are given.—R. **Lance**: An anticryptogamic product. A proposal to use salts of zinc for spraying plants.—M. **Mirande**: Seeds giving hydrogen sulphide by fermentation belonging to the family of the Papilionaceæ. Many leguminous seeds, including beans, peas, and lentils, when moistened with water undergo a spontaneous fermentation, one of the products of which (sulphuretted hydrogen) is poisonous.—C. **Champy**: The experimental change of sex in *Triton alpestris*. A male, subjected to starvation, had its testicle replaced by a fatty band containing neither spermatocytes nor spermatozoids. Two animals after winter starvation were intensively fed. The external colouring changed from male to female in character. One of these was killed, and showed the adipose band; the second, killed two months later, showed a genital gland (section shown in diagram) corresponding to the ovary of a young female.—L. **Roule** and F. **Angel**: Fishes of the family of the Diretmideæ and their place in classification.—A. **Gruvel**: The geographical distribution of some Madagascan lobsters and their commercial exploitation.—J. **Dragoiu** and F. **Vlès**: The cytological consequences of the osmotic arrest of cell division. The increase of the external osmotic pressure first retards, then stops, the division of the cytoplasm. With additional increase of osmotic pressure the internal evolution of the cell is progressively changed in a regular manner. The whole process simulates a kind of regression of nuclear evolution.—M. **Doyon**: The use of chloroform for the preparation of nucleo-proteids and nucleic acids active *in vitro* on the blood. The complexity of the action of the nucleic acids *in vitro*.—M. **Bordier**: The usefulness of diathermal d'Arsonvalisation in atonic wounds.

Books Received.

The Works of Aristotle. Translated into English under the editorship of W. D. Ross. Vol. x.: Politica. By Benjamin Jowett. Oeconomica. By E. S. Forster. Atheniensium Respublica. By Sir Frederic G. Kenyon. Unpaged. (Oxford: Clarendon Press.) 15*s*. net.

Insects and Human Welfare. By Prof. Charles T. Brues. Pp. xii+104. (Cambridge, Mass.: Harvard University Press; London: Oxford University Press.) 10*s*. 6*d*. net.

Fugitive Essays. By Josiah Royce. Pp. 429. (Cambridge, Mass.: Harvard University Press; London: Oxford University Press.) 17*s*. net.

Aeroplane Performance Calculations. By Harris Booth. (The D.-U. Technical Series.) Pp. xv+207. (London: Chapman and Hall, Ltd.) 21*s*. net.

Landscape Gardening. By Andrew J. Downing. Tenth edition, revised by Frank A. Waugh. Pp. xv+439. (New York: J. Wiley and Sons, Inc.; London: Chapman and Hall, Ltd.) 36*s*. net.

The Study of Geological Maps. By Dr. Gertrude L. Elles. (Cambridge Geological Series.) Pp. viii+74+vii plates. (Cambridge: At the University Press.) 12*s*. net.

The Journal of the Royal Anthropological Institute. Vol. l., 1920, July–December. Pp. x+237–465+12+plates. (London: Royal Anthropological Institute.) 15*s*. net.

The Relative Value of the Processes Causing Evolution. By Dr. A. L. Hagedoorn and A. C. Hagedoorn-Vorstheuvel la Brand. Pp. v+294. (The Hague: M. Nijhoff.) 9 glds.

The Reign of Relativity. By Viscount Haldane. Pp. xxiii+430. (London: J. Murray.) 21*s*. net.

Memoirs of the Geological Survey: England and Wales. The Water Supply of Buckinghamshire and of Hertfordshire from Underground Sources. By W. Whitaker. Pp. iv+368. (Southampton: Ordnance Survey Office; London: E. Stanford, Ltd.) 16*s*. net.

The Banana: Its Cultivation, Distribution, and Commercial Uses. By William Fawcett. Second and enlarged edition. Pp. xi+299. (London: Duckworth and Co.) 15*s*. net.

Diary of Societies.

THURSDAY, JUNE 2.

INDUSTRIAL WELFARE SOCIETY (at 51 Palace Street, S.W.1), at 10.30.—Dr. R. M. Wilson: Medical Service in Industry.—Prof. E. L. Collis, Dr. T. M. Legge, and Dr. H. Ross: Discussion on Health Problems in Industry.

ROYAL SOCIETY OF MEDICINE (Laryngology Section) (Summer Meeting), 2.30 to 6.

ROYAL INSTITUTION OF GREAT BRITAIN, at 3.—Sir Alexander C. Mackenzie: Beethoven.

INSTITUTE OF PATHOLOGY AND RESEARCH (at St. Mary's Hospital), at 4.30.—Prof. G. Dreyer: A New Departure in the Serum Diagnosis of Syphilis.

ROYAL SOCIETY, at 4.30.—Dr. T. M. Lowry and Dr. C. P. Austin: Optical Rotatory Dispersion (The Bakerian Lecture).

LINNEAN SOCIETY, at 5.—Prof. Garstang and Others: Discussion on Biogenetic Law (Recapitulation).

© 1921 Nature Publishing Group

Child-Study Society (at Royal Sanitary Institute), at 6.

Royal Institute of British Architects, at 8.—H. M. Fletcher: Building a House.

Chemical Society, at 8.—H. King: Derivatives of Sulphur in Commercial Salvarsan. Part I.—S. Glasstone: Physical Chemistry of the Oxides of Lead. Part I. The Solubility of Lead Monoxide.—M. O. Forster and W. B. Saville: Studies in the Camphane Series. Part XXXIX. *p*-Aminophenylaminocamphor (Camphoryl-*p*-phenylenediamine).—K. Stratton and J. R. Partington: Latent Heats of Fusion. Part I. Benzophenone, Phenol, and Sulphur.—G. T. Morgan and H. D. K. Drew: Researches on Residual Affinity and Co-ordination. Part V. Gallium Acetylacetone and its Analogues.—J. C. Thomlinson: Analysis of Cresol Disinfectants.—G. T. Morgan and D. Webster: Diazo-derivatives of 4-aminophenyl-4′-methylbenz-2′:7′-thiazole (Dehydrothio-*p*-toluidine).—A. K. Macbeth and D. D. Pratt: The Labile Nature of the Halogen Atoms in Substituted Nitromethanes.—K. G. Naik: The Formation and Properties of Dithioketones ($R_2C:S:S$) and Dithioethers ($R_2S:S$). Part II.—K. G. Naik: The Formation and Properties of Dithioketones ($R_2C:S:S$) and Dithioethers ($R_2S:S$). Part III. Interaction of Sulphur Monochloride with Organic Compounds containing the grouping

$$—CO—CH_2—CO—CH_2—CO—.$$

K. G. Naik: The Formation and Properties of Dithioketones ($R_2C:S:S$) and Dithioethers ($R_2S:S$). Part IV. Interaction of Sulphur Monochloride with Organic Compounds containing $—CO—CH_2—CO—$ grouping, forming the Part of a Closed Ring.—K. G. Naik: The Formation and Properties of Dithioketones ($R_2C:S:S$) and Dithioethers ($R_2S:S$). Part V. Nitration of Dithioketones and Dithioethers.—K. G. Naik: Interaction of Sulphur Monochloride with Organic Acid Amides.—S. J. Lewis and F. M. Wood: A New Adjustable Thermostat for all Temperatures between 0° and 100°.—H. Burton and J. Kenner: The Influence of Nitro-groups on the Reactivity of Substituents in the Benzene Nucleus. Part III. The Partial Reduction of the Dinitrotoluenes by Stannous Chloride and Hydrochloric Acid.—J. Kenner and E. Witham: The Influence of Nitro-groups on the Reactivity of Substituents in the Benzene Nucleus. Part IV. The Condensation of Ethyl 3- and 5-nitro-*o*-Chlorobenzoates with Hydrazines.

Sociological Society (at 65 Belgrave Road), at 8.15.—Prof. Abercrombie: The Municipal Survey of Sheffield.

FRIDAY, June 3.

Royal Society of Medicine (Laryngology Section) (Summer Meeting), 10 to 1.

Association of Economic Biologists (in Botanical Lecture Theatre, Imperial College of Science), at 2.30.—F. L. Engledow: Methods of Increasing Yield in Crop Plants.—C. B. Saunders: Some Problems of Seed Testing.—W. Brown: The Physiology of Infection.

Royal Society of Tropical Medicine and Hygiene (at 11 Chandos Street, W.1) (Adjourned Meeting), at 5.—Lt.-Col. H. Kirkpatrick: Some Points on Trachoma.—C. França: An Early Portuguese Contribution to Tropical Medicine.

Royal Photographic Society of Great Britain, at 8.—M. Adams: Eyes in Portraiture.

Royal Institution of Great Britain, at 9.—Dr. L. Huxley: Chronicles of the *Cornhill*.

SATURDAY, June 4.

Royal Institution of Great Britain, at 3.—Dr. R. S. Rait: Scotland and France.

MONDAY, June 6.

Victoria Institute (at Central Buildings, Westminster), at 4.30.—Rev. Prebendary H. E. Fox: The Roman Wall in North Britain.

Institute of Actuaries (Annual General Meeting), at 5.

Royal Institution of Great Britain, at 5.—General Meeting.

Royal Institute of British Architects, at 8.

Society of Chemical Industry (London Section) (at Chemical Society), at 8.—Dr. L. Levy: Industrial Respirators.—Prof. K. G. Naik: The Gold and Silver Thread Industry in India.

Royal Geographical Society (at Æolian Hall), at 8.30.—E. Teichman: Journeys in Kam.

TUESDAY, June 7.

Royal Horticultural Society, at 3.

Royal Institution of Great Britain, at 3.—Sir James Frazer: London Life: Time of Addison.

Medico-Psychological Association of Great Britain and Ireland (at Maudsley Hospital, Denmark Hill), at 4.30.—Sir Frederick Mott: Second Maudsley Lecture.

Zoological Society of London, at 5.30.—Dr. F. M. Chapman: The Distribution of Bird-life in the Urubamba Valley of Peru.—S. Maulik: New Indian Drilid Beetles.—Prof. J. P. Hill: Exhibition of Some Marsupial Embryos, especially the Koala and the Wombat.—R. I. Pocock: The External Characters of the Koala (Phascolarctos) and Some Related Marsupials.—Dr. C. F. Sonntag: The Comparative Anatomy of the Koala (*Phascolarctos cinereus*) and the Vulpine Phalanger (*Trichosurus vulpecula*).

WEDNESDAY, June 8.

British Science Guild (Annual Meeting) (at Goldsmiths' Hall, Foster Lane), at 3.—Lord Montagu of Beaulieu: The Work of the Guild.—The Dean of St. Paul's: The Road to Ruin and the Way Out.—Sir Richard A. S. Redmayne: The Importance of Research in Promoting the Development of the Mineral Industries.

Geological Society of London, at 5.30.—Dr. W. Fraser Hume: The Relations of the Northern Red Sea and its Associated Gulf Areas to the "Rift" Theory.

Institution of Electrical Engineers (Wireless Section) (at Savoy Place), at 6.—Prof. J. S. Townsend: Electric Oscillations along Straight Wires and Solenoids.

THURSDAY, June 9.

Institution of Mining Engineers (at Geological Society), at 11.—Third Report of the Committee on "The Control of Atmospheric Conditions in Hot and Deep Mines."—J. P. Rees: Observations of Temperature and Moisture in Deep Coal-mines.—Prof. H. Briggs: Characteristics of Outbursts of Gas in Mines.—H. C. Harrison: The Use and Distribution of Shale-dust in Mines. The following papers, which have already appeared in the Transactions, will be discussed:—A. E. Beet and A. E. Findley: The Better Utilisation of Coking Slack.—J. I. Graham: The Normal Occurrence of Carbon Monoxide in Coal-mines.—T. L. Galloway: An Improved Method of Determining the Relative Directions of Two Reference-lines or Bases for Mining Surveys.—E. Bury, W. Broadbridge, and A. Hutchinson: Froth Flotation as Applied to the Washing of Industrial Coal.

Institute of Pathology and Research (at St. Mary's Hospital), at 4.30.—Dr. H. Head: Release of Function in the Nervous System.

Royal Society, at 4.30.—*Probable Papers.*—Prof. C. S. Sherrington: Break-shock Reflexes and "Supramaximal" Contraction-response of Mammalian Nerve-muscle to Single-shock Stimuli.—R. J. Ludford and J. B. Gatenby: Dictyokinesis in Germ Cells, or the Distribution of the Golgi Apparatus during Cell Division.—Dr. F. W. Edridge-Green: The Effect of Red Fatigue on the White Equation.—E. Ponder: A Method for Investigating the Hæmolytic Activity of Chemical Substances.—W. H. Pearsall: The Development of Vegetation in the English Lakes, considered in Relation to the General Evolution of Glacial Lakes and Rock Basins.

London Mathematical Society (at Royal Astronomical Society), at 5.—M. J. Conran: Curvature and Torsion in Elliptic Space.—J. L. S. Hatton: The Inscribed, Circumscribed, and Self-conjugate Polygons of Two Conics.—M. J. M. Hill: The Differential Equations of the First Order derivable from an Irreducible Algebraic Primitive.—F. S. Macaulay: Note on the Resultant of a Number of Polynomials of the Same Degree.

Royal College of Physicians of London, at 5.—Dr. F. L. Golla: The Objective Study of Neurosis (Croonian Lecture).

Optical Society (at Imperial College of Science), at 7.30.—H. Lee: Achromatism.—W. L. Custance: Demonstration of the Société Genevoise Universal Measuring Machine.

FRIDAY, June 10.

Royal Society of Arts (Indian Section), at 4.30.—Sir George Seymour Curtis: The Development of Bombay.

Royal Astronomical Society, at 5.

Physical Society of London (at Imperial College of Science), at 5.—Sir Ernest Rutherford: The Stability of Atoms (Lecture).

Royal Institution of Great Britain, at 9.—Dr. A. G. Webster: Absolute Measurements of Sound.

CONTENTS.

PAGE
The Metric System and World Trade 417
Lamarckism Unashamed. By J. A. T. 419
Dyes and Dyeing. By Dr. J. Huebner 421
Time and Space. By J. F. T. 422
Our Bookshelf 422

Letters to the Editor:—

Earth-worms, Mud-worms, and Water-worms.—**Sir E. Ray Lankester, K.C.B., F.R.S.** 424
Biological Terminology.—**Sir G. Archdall Reid, K.B.E.** 425
The Great Sun-spot Group and Magnetic Disturbances, May 8–21.—**Father A. L. Cortie, S.J.** . 426
The Reparation Act and Scientific Research.—**J. S. Dunkerly** 427
The Cosmology of Dante. (*Illustrated.*) **By Dr. J. L. E. Dreyer** 428
The Natural History of Cultivated Plants 430

Obituary:—

Prof. E. J. Mills, F.R.S. By J. M. T. 432
Notes 434

Our Astronomical Column:—

Pons-Winnecke's Comet 438
Speculations on the Formation of Spiral Nebulæ . . . 438
The Companion of α Herculis 438
Administration of Scientific Work 439
New Technical Applications of an Electrostatic Principle 439
Dalton and Atomic Symbols 440
The Melbourne Meeting of the Australasian Association. II. 440
University and Educational Intelligence . . . 442
Calendar of Scientific Pioneers 444
Societies and Academies 444
Books Received 447
Diary of Societies 447

© 1921 Nature Publishing Group